

REMARKS

Claims 1-28 are pending in the application after this amendment. The amendment and/or addition of claims is not to be considered in any way an indication of applicants' position on the merits of the amended, cancelled, and/or withdrawn claims. In the following sections of the Amendment the objections and rejections set forth by the Examiner in the June 22, 2005, Office action are addressed. These objections and rejections are respectfully traversed, and detailed arguments are set forth below.

As a preliminary matter, the Examiner has objected to the drawings under 37 CFR 1.83 (a) and stated that the drawings must show every feature of the invention specified in the claims. Specifically, the Examiner stated that mounting apparatus (claims 8-9 and 18-20) must be shown. The mounting apparatus is specifically shown in several figures. FIGS. 14 and 15, for example, show a guide having at least one divider guide insulator supported by a *mounting apparatus 30j*". FIG. 17 shows a *mounting apparatus 30j* that is dividable. FIG. 18 shows a set of divider guide insulators supported by respective integral *mounting apparatus 30j*", the *mounting apparatus 30j*" being perforated for easy division. Applicants respectfully request that an indication that the drawings are acceptable be provided.

As a second preliminary matter, the Examiner rejected claim 12 under 35 USC §112, first paragraph. Claim 12 is directed to the embodiments shown in FIGS. 3 and 4. FIG. 3 is a cross-sectional view of a second exemplary embodiment of a guide of the present invention having a funnel shaped opening or first tip passageway end on the top guide surface. FIG. 4 is a cross-sectional view of a third exemplary embodiment of a guide of the present invention having an enlarged, partial funnel shaped opening or first tip passageway end on the top guide surface. In the summary of the invention, applicants specified that "[s]ome embodiments of the present invention include a tip passageway end that guides the tip towards the transmission path using a guide enhancing mechanism." In applicants' discussion of the embodiment of FIG. 3, they state "The funnel shape of the first tip passageway end 36a would help to guide and secure the tip 22 within the first tip passageway end 36a." Similarly, in applicants'

discussion of the embodiment of FIG. 4, they state "The partial funnel shape of the first tip passageway end 36b would help to guide and secure the tip 22 within the first tip passageway end 36b." Applicants respectfully request a clarification of this rejection if it is to be maintained.

The Examiner rejected claims 1-4, 7-11, 13-14, and 17-20 under 35 USC §102(b) as being anticipated by U.S. Patent No. 6,208,155 to Barabi et al. (the "Barabi reference"). The Examiner rejected claims 5-6 and 15-16 under 35 USC §103 as being unpatentable over the Barabi reference, in view of U.S. Patent No. 6,281,692 to Bodenweber et al. (the "Bodenweber reference"). These rejections are respectfully traversed.

The present invention relates to a guide that may guide, lead, and/or direct a tip towards a transmission path. The guide preferably includes at least one guide insulator having at least one insulated exterior surface. The guide insulator(s) defines at least one passageway or bore such that each passageway has a first tip passageway end and a second transmission path passageway end. In use, the user would place the guide over the transmission paths to be monitored or tested by inserting the transmission paths through the second passageway end such that the transmission paths are accessible through the passageway. The user would then insert each of the test probe tips into respective first passageway ends opposite the respective transmission paths. Preferred embodiments use only a few passageways so that the guides are able to be placed in smaller spaces and may be usable with more types of circuit board components. The guide may also have general protection properties such as protecting transmission paths from damage caused by accidental probing, dropping of heavy items thereon, dropping of conductive items thereon, or any contacting that is unwanted.

The Barabi reference describes a completely different device in which the test socket is associated with the test probe, not the device to be tested. The Barabi reference has a test socket that includes a frame that holds an array of probes (pogo pins). An interior IC platform has an array of guide holes that register with the projecting

tips of the pogo pins. The platform and the array of probes are, in effect, a single unit. The single unit is placed over a ball grid array to be tested. Barabi never contemplates the platform with the array of guide holes as an independent unit, but only as a unit in combination with the array of pogo pins. The Barabi platform with the array of guide holes, taken alone, would suffer from many of the same problems as the device described in U.S. Patent No. 6,281,695 to Chung, et al. (the "Chung reference") that was discussed in applicants' original specification. For example, one problem with the Barabi platform is that it must be made for each size and shape ball grid array to be tested. This could require the user to purchase and store an incredible number of different sized platforms. Still another problem with the Barabi platform is that it contacts all sides of the ball grid arrays to be tested, again limiting its ability to be used with different types of devices to be probed.

The Bodenweber reference also describes a completely different device in which the interposer is associated with the test probe, not the device to be tested. As described at column 4, lines 8-21, the Bodenweber device is typically used with a stationary test bed that may be part of a table or workbench. In operation, interposer would be placed on the stationary test bed. The pogo pin contactor would protrude into the second passageway and make contact with the conductive element. Since the conductive element is freely moveable within the central portion, the conductive element would move upwardly in conjunction with the upward movement of the pogo pin contactor. Then, the input/output pin of the ceramic substrate to be tested would be brought into contact with the conductive element and thus may be tested by the test bed.

Applicants will address several of the claims specifically in this response, but reserve the right to argue additional patentable subject matter in future communications.

Claims 5, 6, 15, and 16 include the limitation of a contact enhancing mechanism. The Examiner rejected these claims as obvious over the Barabi reference in combination with the Bodenweber reference. First, applicants respectfully submit that

the Barabi and Bodenweber devices are nonanalogous to the present invention. Neither reference is concerned with the same considerations as or problems of the present invention. Both the Barabi and Bodenweber devices are connected to the test probes. Both the Barabi and Bodenweber devices must be made for each size and shape of the devices to be tested. Further, neither the Barabi nor Bodenweber devices have the general protection properties (e.g. protecting transmission paths from damage caused by accidental probing, dropping of heavy items thereon, dropping of conductive items thereon, or any contacting that is unwanted) of the present invention. Second, applicants respectfully submit that the basic requirements of a *prima facie* case of obviousness require that there must be some suggestion or motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings (MPEP 2143). The proposed modification, however, cannot render the prior art unsatisfactory for its intended purpose (MPEP 2143.01) and/or cannot change the principle of operation of a reference (MPEP 2143.01). The Barabi reference is primarily directed to specialized probe tips for making electrical contact with a solder ball of an integrated circuit device such as a BGA. The Barabi specialized tips include two perimeter point structures having interior angled edges that form a front hollow region in the probe tip for receiving the solder balls of a BGA. To insert the Bodenweber conductive elements into the Barabi guide holes, the Barabi guide holes would have to be modified to include a central portion to accommodate the conductive element. Using the modified Barabi device with the Bodenweber conductive elements the Barabi specialized tips would not come into contact with the solder balls. Accordingly, the proposed modification of the Barabi device would make the Barabi device unsatisfactory for its intended purpose and/or would change the principle of operation of the Barabi device. Applicants respectfully submit that claims 5, 6, 15, and 16 are allowable.

Claim 7-9 and 18-20 are directed to the structure shown in FIGS. 14-18. Claims 7-9 have been amended to more clearly define the invention. Regarding claim 18, the Examiner equates the Barabi frame wall being equivalent to the claimed at least

one divider guide insulator. The Barabi frame wall, however, does not accommodate a transmission path (claim 18, element (d)) and the tip does not contact the transmission path through the passageway defined by the Barabi frame wall. Further, claim 18 specifies that the "at least one divider guide insulator mountable in said at least one mounting apparatus" (emphasis added). Even taking the Examiner's characterization of the Barabi mounting spring as being equivalent to the claimed mounting apparatus (the characterization of which applicants specifically reject) and the Barabi frame wall as being equivalent to the claimed at least one divider guide insulator (the characterization of which applicants specifically reject), the Barabi frame wall is clearly not in the Barabi mounting spring and, therefore, this claim element is not met. Regarding claim 19, applicants specifically reject the Examiner's characterization of the Barabi frame wall and the Barabi mounting spring as being integral (they are of two different materials). Regarding claim 20, applicants specifically reject the Examiner's characterization of the Barabi mounting spring as being divisible. Applicants respectfully request clarification if these rejections are to be maintained.

Claims 10 and 17 are specifically directed to the embodiment shown in FIG. 19. Claim 10 is dependent on claim 1 and claim 17 is dependent on claim 11. Claims 1 and 11 specify that the tip contacts the transmission path through the passageway. The Examiner Equates the Barabi frame wall to a passageway, but the solder balls never come in contact with or enter the Barabi frame wall. Accordingly, applicants respectfully submit that the Barabi reference does not teach or suggest at least two guide insulators. Further, since it does not teach at least two guide insulators, the Barabi reference does not teach or suggest at least two guide insulators being adjustable in relation to each other as claimed in claims 10 and 17. Applicants respectfully submit that claim 10 and 17 are allowable.

Claim 12 is directed to tip passageway end that has a funnel shaped opening (FIG. 3) or an enlarged, partial funnel shaped opening (FIG. 4). None of the cited references teach or suggest this structure. Applicants respectfully submit that claim 12 is allowable.

Claim 14 is directed to the embodiment shown in FIG. 5 that has an opening on a peripheral guide surface of said guide insulator. Although the Examiner states that this is shown in the Barabi reference, applicants were not able to find any reference to an opening on the peripheral guide surface of the Barabi platform. Applicants respectfully request clarification if this rejection is to be maintained.

Claims 21-24 are apparatus claims dependent directly or indirectly from independent claim 1. Therefore, these claims are patentable for the same reasons as were discussed for claim 1, and further in light of the further limitations contained in the dependent claims.

Claims 25-28 are apparatus claims dependent directly or indirectly from independent claim 11. Therefore, these claims are patentable for the same reasons as were discussed for claim 11, and further in light of the further limitations contained in the dependent claims.

The specification has been amended to correct grammatical and idiomatic errors of which applicants are aware. No new matter has been added in these amendments. It is submitted that these amendments should not be objectionable.

In view of the above, it is submitted that the currently pending claims are patentable. Accordingly, the Examiner is requested to reexamine the application, to allow the claims, and to pass the application on promptly to issue.

A Petition for Extension of Time for three months is enclosed herewith.

Please charge Deposit Account No. 50-2115 for any additional fees that may be required.

Respectfully submitted,



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